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The Tech
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WEATHER, p. 2
THU: 43°F | 40°F Mostly Cloudy
FRI: 50°F | 32°F Mostly Sunny
SAT: 44°F | 35°F Mostly Sunny

Volume 137, Number 34
Thursday, November 30, 2017

MIT to finish cogen renovations by 2020

Upgrades part of Climate Action Plan to reduce campus emissions

By Zoe Anderson
ASSOCIATE NEWS EDITOR

The MIT Department of Facilities is upgrading the cogeneration, or "cogen," plant in the Central Utilities Plant (CUP) at 59 Vassar Street by installing new turbines and upgrading the chilled water plant. The new turbines are projected to start providing energy in 2020.

Cogeneration is a means of generating power in which a turbine (in MIT's case, a natural gas-powered turbine) generates electricity, and a heat recovery steam generator captures waste heat from the turbine's exhaust. The plant then uses this captured steam for heating and cooling.

The cogeneration plant, which supplies heated and chilled water and about 50 percent of the main campus's electricity, is part of a portfolio of projects that make up MIT's Climate Action Plan, which MIT announced in October 2015. The Climate Action Plan's mission is to reduce campus emissions by at least 32 percent by 2030. MIT is currently on track to surpass this goal, Director of Utilities Ken Packard told *The Tech* in an interview Tuesday.

Built in 1995, the CUP initially had one turbine which produced, on average, approximately 20 megawatts (MW) of power and 1,800 pounds of steam. In 1995, MIT's peak load was 22 MW; it is now 38 MW. This peak

Cogen, Page 2

YES, IT IS
REAL
GRASS
We invite you to enjoy, but please be gentle!
Tell us what you think!
http://bit.ly/MITindoorlawn
#MITIndoorLawn

MAHI SHAFIULLAH—THE TECH

MIT Indoor Lawn project covered significant parts of the first floor of the Student Center (W20) with real grass Nov. 27.

Committee on Discipline releases report for 2016-17 academic year

Number of complaints down to 279 from 317 previously, in part due to changes in Good Samaritan Amnesty Policy

By Jessica Shi
ASSOCIATE NEWS EDITOR

The Committee on Discipline (COD) report for the 2016-17 academic year, released earlier this month, breaks down the 279 complaints that were brought before the COD this year by several metrics, including the type of misconduct, the method of resolution, and the outcome.

Of the 279 complaints (down from 317 in 2015-16), 82% were of alleged individual student misconduct, while the other 18% were of alleged student organization misconduct.

Academic misconduct comprised 80 cases, up from 52 in 2015-16 and 33 in 2014-15, and the majority of these cases (47) were categorized under cheating.

Cases of personal misconduct, also a subset of individual student misconduct, totalled 144, down from 192 in 2015-16. The likely reason for this drop, according to the report, was a change to the Good Samaritan Amnesty Policy such that the COD and Office of Student Conduct "no longer processes these cases." The report also noted a 48% decrease in the number of unauthorized access cases, which usually involve "hacking" or "tours."

There were six Title IX related cases, down from 11 in 2015-16; this included one sexual harassment case and five cases of nonconsensual sexual contact or penetration. A newly separated category, intimate partner violence, appeared on the report this year, but zero such cases were reported.

Incidents involving student organizations included 10 cases categorized under alcohol, down from 31 in 2015-16, and 15 noise complaints, up from 13.

The most common methods of resolution were COD administrative resolutions (100), faculty letters to file (63), and delegation to a student-run judicial mechanism (36). Regarding the third option, the report mentioned that the COD partnered with student governing organizations such as the Interfraternity Council, Panhellenic Council, and Association of Student Activities to handle most cases concerning student organization misconduct.

Case outcomes included two expulsions and 8 suspensions or degree deferrals, but in alignment with patterns from previous years, most sanctions were less severe and involved probation, letters to file, and substance abuse education or treatment, in addition to 181 cases ambiguously categorized under "other educational sanctions or referrals"; many cases involved multiple sanctions as well.

When asked for reasons or additional context to explain the above trends, Professor Suzanne Flynn, chair of the COD, wrote in an email sent to *The Tech*, "Changes in the numerical count of cases can occur for many possible reasons and any comments would only be speculation at this time."

The report also outlined initiatives the COD pursued last year: members, especially those on the Sexual Misconduct subcommittee, received extensive training on topics such as "LGBT issues related to the COD's work, questioning techniques, and the neurobiology of alcohol-induced blackouts" to develop "expertise and consistency" when hearing cases. Additionally, the Sexual Misconduct subcommittee met biweekly to conduct case study reviews and develop an internal rubric for sanctioning.

Remembering Sam Bauman '17

Sam Bauman '17 died Nov. 21 at age 23. He was a double major in physics and math and a resident of East Campus. He was a "loving" and "brilliant" young person who had many circles of friends and participated in a wide variety of activities on campus, including fire spinning, the chamber music society, and the gymnastics club. Dr. Aaron Krasner, speaking at Bauman's funeral, urged everyone to "encourage, support, and love … yourselves and each other, however flawed."

There will be a memorial service and remembrance this Sunday, Dec. 3, 11 a.m.–12 p.m. in the MIT chapel, followed by a reception in W11.

CA hottest destination for MIT student externs

IBM, Hudson River Trading, Microsoft among most popular externship hosts

By Aishwarya Anantharaman
STAFF REPORTER

1425 students sent in 3686 applications to the MIT Alumni Association's Externship Program this year, according to Elena Byrne, Assistant Director of Student Alumni relations at the MIT Alumni Association. Of the 517 students who received matches from companies, 420 accepted their externship offers to work with alumni sponsors this January.

The externs for this year consist of 58 freshmen, 133 sophomores, 138 juniors, 70 seniors, and 21 graduate students.

Companies offered a total of 717 externships with 287 alumni participating and 183 alumni hosting externships for the upcoming Independent Activities Period. California, New York, and Boston were the top externship locations this year, with 98, 72, and 46 externs, respectively.

The Alumni Association's externship program began in 1997 and has grown from an initial group of 20 to 25 students to what it is today. According to Byrne, the program aims to provide an exploratory experience for students in their hometown with a local alumnus.

Byrne also said that the externship program helps alumni by increasing student awareness about opportunities in their fields, introducing them to potential summer interns and future employees, building satisfying and lasting mentor relationships, and reconnecting alumni with MIT and the student experience.

The most popular externships included opportunities at IBM, Hudson River Trading, Millennium Space Systems, Tech Square Trading, Microsoft, RightHand Robotics, Five Rings Capital, Twitch Interactive, Inc., Quizlet, Five Rings Capital, and NASDAQ OMX, with IBM receiving 280 applications.

Dr. Dario Gil PhD '03, Vice President of AI and IBM Q, wrote in an email sent to *The Tech* that "this year alone, IBM will host 31 MIT student externs, which has grown from 2 students two years ago. This is due, in part, to the recently announced partnership with MIT on the MIT-IBM Watson AI Lab."

IN SHORT

IAP Physical Education registration opened for undergraduate students on Wednesday, Nov. 29 at 8 p.m. It will close on Wednesday, Dec. 6 at 1 p.m.

Pre-registration for IAP and spring term opens Friday, Dec. 1.

A gathering will be held to honor and celebrate the life of MIT's 14th President Paul Gray '54, SM '55, ScD '60 Nov. 30, who was in office from 1980-1990. Gray died Sept. 18 at age 85.

Send news and tips to *news@tech.mit.edu*.

DON'T LOOK DOWN ON HASS

The case for engaging in research into automation's effect on labor. **OPINION, p. 4**

A PLAY FOR 'EVERYBODY'

MIT production dazzles in new Theater Arts building. **ARTS, p. 6**

MAKING CHANGES

In new class next spring, students will redesign the freshman year. **NEWS, p. 2**

THE POLITICS OF SCIENCE DENIALISM

Sen. Whitehouse: Many Republicans reject climate skepticism but are afraid to go public. **SCIENCE, p. 3**

A NEW GENERATION OF CRISPR

We interview MIT's dynamic duo of gene-editing. **SCIENCE, p. 3**

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WEATHER

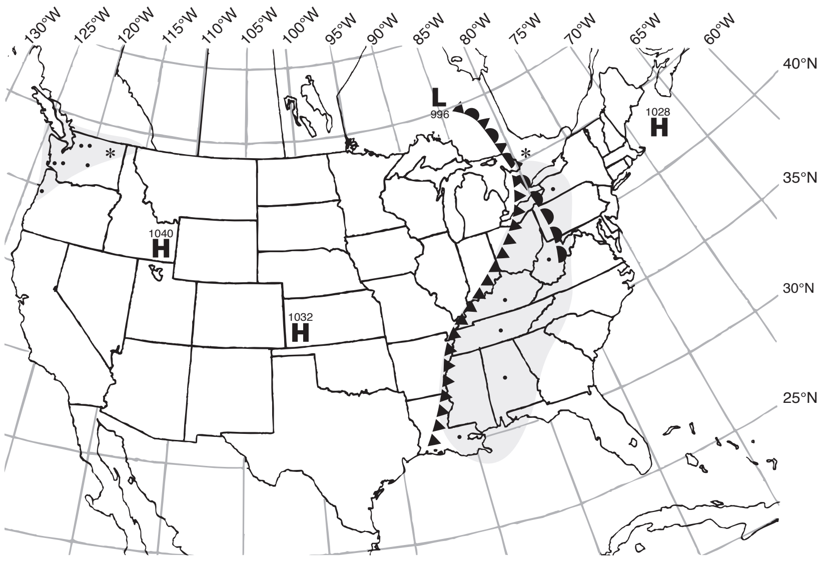
A great start to December

By Jordan Benjamin
STAFF METEOROLOGIST

Following yesterday's brief excursion around 60°F, a weak cold front continues to progress eastward across the Northeast and will move offshore early tomorrow. In its wake, we will experience more seasonable weather with highs in the 40s, lows in the 30s, and no precipitation over the weekend and early into next week. No major weather systems are expected to impact the US before perhaps the middle of next week so enjoy the calm weather and cool, sunny start to December!

Extended Forecast

Today: Mostly Cloudy Late. High around 43 °F (6 °C). South wind at 5-10 mph.
Tonight: Chance Showers. Low around 40 °F (4 °C). South wind at 5-10 mph.
Tomorrow: Mostly Sunny. High around 50 °F (10 °C). Low around 32 °F (0 °C). NW wind around 10 mph.
Saturday: Mostly Sunny. High around 44 °F (7 °C). Low around 35 °F (2 °C).
Sunday: Mostly Sunny. High around 48 °F (9 °C)



Situation for Noon Eastern Time, Thursday, November 30, 2017

Weather Systems	
H	High Pressure
L	Low Pressure
§	Hurricane

Weather Fronts	
— — —	Trough
◠◠◠◠	Warm Front
▲▲▲▲▲	Cold Front
▲◡▲◡	Stationary Front

Precipitation Symbols	Snow	Rain
Showers	* ▽	• ▽
Light	*	•
Moderate	**	••
Heavy	⁂	∴

Other Symbols	
≡	Fog
☈	Thunderstorm
∞	Haze

Compiled by MIT Meteorology Staff and *The Tech*

Cogen plant to use natural gas

Cogen, from Page 1

load is projected to increase to 42 MW when MIT.nano and the new undergraduate and graduate dorms are completed.

In addition, the current turbine is nearing the end of its projected 20-year lifespan and will need to be replaced with two new turbines, each equipped with a heat recovery steam generator. The new plant will produce 44 MW of power and 3,000 pounds of steam.

However, the CUP will not necessarily require another upgrade 20 years in the future. "I think we're going to have some optionality on that," Packard said. "This turbine will have some rigorous service from the manufacturer itself, and I think it will be MIT's choice in how they reinvest in this turbine setup over the life of the turbines and how they want to extend it."

MIT initiated permit reviews for CUP upgrades in December 2015. After approvals from the Massachusetts Department of Energy, MIT began construction this July and projects that the upgrade will be complete in 2020.

"Upgrades to the central utility plant will ensure that it operates far more efficiently, fully offsetting the expected 10% increase in energy demand due to campus growth," Maria Zuber, vice president for research, wrote in an email to *The Tech* yesterday.

The new plant will use natural gas instead of fuel oil as the current plant does, except in cases of emergency. In addition to having a lower carbon footprint than fuel oil, natural gas is also currently the cheapest fuel.

Two turbines as opposed to one will also increase the CUP's resiliency, which is important in preparing for emergency conditions and heat needs.

"We're not going to solve [climate change] with a silver bullet, it's going to be silver BBs, the project being one of the BBs in that portfolio," Packard said.

In addition to the cogen plant, the Climate Action Plan also includes projects to reduce buildings' energy demands, as well as the Summit Farms solar plant in North Carolina, from which MIT currently imports 17 percent of campus electricity. MIT aimed to source 40 percent of its power from the plant when it first opened last year.

MIT is working "to meet carbon neutrality in the context of our own campus [and] what's feasible in a dense urban environment that requires completely resilient power systems," Director of Sustainability Julie Newman said in a phone interview with *The Tech* Tuesday.

The new facility will have windows to allow passerby a view of the energy machinery inside. It will also have a presentation center where MIT can educate the community about how the CUP functions and what MIT is doing to solve the energy crisis. MIT will continue to give tours for students and the public.

Spring course to allow students to plan new freshman experience

"Designing the First Year at MIT" is a new 12-unit course that will open to undergraduate and graduate students this spring. It will count as HASS-E credit and towards a design minor.

The course was created because "students are the best advocates for the change they want to see at MIT. And ultimately, we hope what we learn in the fall, and what comes out of the class, will serve to make MIT's first year the best that MIT can offer to future students," according to the Office of the Vice Chancellor Ian Waitz's website.

The course is described as "design-intensive" and "team-based and project focused," according to the website. It will culminate in a final project presentation to the senior administration. Enrolled students will tackle various issues regarding the first year experience, including GIRs and residence experience.

The course will be taught by experts from the fields of education, design, management, and project engineering. It will be advised by MIT faculty, including Waitz.

The course will be available for pre-registration tomorrow, Dec. 1.

—Sheila Baber

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The new faces of CRISPR

An interview with the researchers behind recent gene-editing advances

By Meenakshi Sivapriya and Tu-Lan Vu-Han
Tech Staff

Last month MIT professor Feng Zhang's lab published two papers in *Nature* and *Science* on new CRISPR technology that uses the Cas13 enzyme to target RNA and a new system called REPAIR that allows single base-editing. *The Tech* interviewed authors Omar Abudayyeh '12, a MD-PhD student at Harvard Medical School, and Jonathan Gootenberg '13, a PhD candidate at Harvard University, to talk about their research and collaboration.

"We went to a DJ Khaled concert when our first paper was published," Abudayyeh said. "This time, we went to an all-you-can-eat sushi place."

Abudayyeh and Gootenberg have become a well-coordinated team. "It's really rare that you find someone that you can work really well with. But when you find that, it's really great," Gootenberg said, recalling other famous scientific duos like Watson and Crick.

Both are well-versed in the ongoing discussions about CRISPR. "We have had the ability to edit genes for many years and so far genetic modification has not brought about designer babies or any such epidemics," Gootenberg argued. "CRISPR just allows the process of genetic modification to be more efficient."

This year, Abudayyeh and Gootenberg have been awarded a place on the Forbes "30 under 30 2018" list in the category of healthcare. We asked them about the award and how it impacted their lives: "It's much like any award. It doesn't change what you do or how you do it. The fulfilment lies in their scientific work, regardless of any awards they receive," Gootenberg explained, "But awards open a lot of doors and opportunities down the road." Abudayyeh brought up one such opportunity: the possibility of opening a lab of their own one day.

Further down the road, Abudayyeh wants to work on ageing and cell senescence. Both remember meeting a Nobel laureate at a conference and asking him about the prize: "He said that he wished he hadn't won the prize, because the things that came with it took away his time to work on his science," they recalled, adding that "there are only so many hours in a day" — and researchers all have to choose how they spend that time wisely.

In making these decisions, the quality of the mentorship that they have received has been very crucial. "Feng Zhang is an excellent mentor," Gootenberg said, looking at Abudayyeh, who added, "I actually started working in the lab expecting to learn how to do science — but I have learned so much more."

Both are aware of the successful road that their careers are taking, but they also remember moments of frustration and failure. "We all have those," they said. "But it's important to remember to persevere through them because we all have these phases and failures happen.They are important and also, in a way, necessary. Patience is the key."

U.S. senator on 'science denialism' in the face of climate change

Speaking in the Media Lab, Sen. Whitehouse asserts 'only a few' Senate Republicans believe climate skeptics

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Adib Hasan—The Tech

U.S. Senator Sheldon Whitehouse speaking at an Environmental Solutions Initiative event as a guest speaker, Nov. 22 at MIT Media Lab.

By Mark Goldman

U.S. Senator Sheldon Whitehouse, a Democrat from Rhode Island, spoke last Monday to a full audience in the Media Lab as part of the MIT Environmental Solutions Initiative's "People and the Planet" lecture series.

MIT professor John Fernandez, director of the Environmental Solutions Initiative, opened the talk by asking the audience what they will say when their grandchildren ask, "What did you do when the oceans were rising and superstorms wiped out cities leading to mass destruction?"

Upon taking the stage, Whitehouse got straight to the issue he came to discuss: "The enterprise of science has a rival: science denialism." He went into the history of science denialism. He discussed those rejecting Einstein's theory of relativity in the early 1900s despite evidence from the solar eclipse of 1919. Whitehouse also discussed the Tobacco Institute, created by the tobacco industry to spread faux science as propaganda to derail regulations.

An audience member asked how many of Whitehouse's Republican colleagues actually believed the climate change denial groups and how many just felt bullied into voting for fear of losing reelection. Whitehouse mentioned that he knew of many who agreed that climate change is primarily human-driven, and propositioned that "only a few" Senate Republicans believe what climate skeptics say. When discussing climate change with him, a Republican colleague made sure even his staff was not present when expressing his real opinion for fear of being reported.

"It is good to hear from a reliable source that there are Republican senators who at face value mention climate change denial but believe the science," Seiji Engelkemier '19 said in an interview with *The Tech*.

Whitehouse listed some advantages that science denialism has over science. Unlike science, denialists do not have to prove anything; they just have to point out flaws or gaps. The creation of a large network of denial groups allows for more complexity and obscurity, which creates a seemingly larger consensus than the Tobacco Institute could singly do. Whitehouse claimed that the Supreme Court's decision in *Citizens United v. Federal Election Commission* allows for greater donor anonymity, with groups like Donors Trust obscuring the funders of science denialism. He asserted that by going straight to the news instead of publishing peer-reviewed articles, "Climate denial groups avoid the tests of true science," and can get their message out easier than science. Whitehouse asserted, "This isn't science. This is public relations in a lab coat," which "has unlimited funding."

In concluding his talk, Whitehouse said that science needs a group designed to defend the enterprise of science, similar to how firefighters put out fires or police departments investigate crimes. He asserted that this group should not be filled with scientists, whose goal is to produce knowledge, using an analogy that people wouldn't call a scientist if their home was on fire.

When it comes to political action, Whitehouse stated that his preferred method of controlling climate change would be a tax on carbon, as this tax would be easy to implement on many large producers, easy to apply to imports, and allow people to make market-based decisions. Since he claimed that Congress is heavily influenced by climate change denier groups, Whitehouse's views of the current path forward would involve multi-state agreements implementing emission reductions. During the previous "People and the Planet" lecture last semester, former U.S. Representative Bob Inglis, a Republican, also discussed benefits of a carbon tax, according to MIT News.

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STAFF COLUMN

The need for a more nuanced understanding of technology

An automaton did not create this headline

By Fiona Chen
TECH STAFF

At a school like MIT, a global leader in technological innovation, students and faculty should work not only to promote technology's advancement, but also to understand and craft comprehensive solutions to the problems that it creates. One such problem is automation's ability to displace middle-class laborers by mechanizing their work.

This issue was the topic of a recent op-ed in the Boston Globe by MIT President Rafael Reif. In his article, Reif calls on all of society — economists, policymakers, businesspeople, educators, and students — to come together and find long-term solutions.

There is a strong impetus for members of the MIT community to be part of this solution. As with many other pressing global issues, the issue of job loss created by automation is an interdisciplinary one, and its solutions will be interdisciplinary in nature as well. MIT students are particularly well-situated to help advance these solutions, as the institute not only offers incredible resources in science and technology fields, but also in the social sciences. In fact, in an interview with *The Tech*, President Reif recalled that at conferences with other political, business, and academic leaders, "[People] basically ask us [...] You have the strongest economics department in the country; [...] the strongest technologists and scientists; the strongest social scientists [...] Why don't you tell us what it is that we should be doing? How [can we] address this problem?"

Despite this strong impetus, however, very few MIT students are substantively engaging with the idea that the technological work they hope to dedicate their careers to could potentially ruin others' abilities to work. This could be true for a multitude of reasons. For one, most MIT students are already busy with work within their own disciplines. Additionally, many MIT students regard the humanities and social sciences with disdain and disrespect. Then, for the students who care and desire to get involved, it isn't always clear how they can do so. However, there are material ways in which MIT students can and should make a difference.

Developing a solution always begins with fully understanding the problem. Currently, there are a multitude of questions on this topic that are open to debate: What jobs will be lost, and what jobs will be created? How quickly will these changes occur? What practices can mitigate the negative effects?

For students, this learning process can take many forms. Students can have casual conversations with their friends or organize formal discussions in a political club. They can take an economics class about the functionings of the labor market, a political science class about social security policies, or an STS class about the ethics of science or historic role of technology in transforming society. They can do UROPs with any of the numerous professors conducting research in these topics — many of whom are scholars at the forefronts of their fields.

One example is Economics Professor David Autor, a leading labor economist whose research on the effects of automation and trade on employment and earnings has been highly influential. In an interview with *The Tech*, Autor noted that the problem is not with the number of jobs available but rather their quality and their accessibility. He stated that "The challenge is more for less educated adults, who do repetitive tasks; manual labor [...] we're already in a setting where labor force participation and wages are declining for [them]."

One area in which MIT is already developing potential solutions is in education accessibility. High-quality universities like MIT can provide individuals with the education and training necessary to enter work fields that are less susceptible to automation, but there is obviously a limitation to the number of students that such universities can accept. Technology can resolve this issue by expanding access to MIT's resources beyond its physical campus.

For example, the new MITx MicroMasters program allows individuals to, after taking a set of online courses, apply for an accelerated Master's degree program at MIT or several other top universities. The program just launched last year, but has already attracted over 180,000 learners, with 1,100 finishing the online course series and 622 qualifying to apply for a full master's degree. On the MicroMasters program, President Reif noted that "it's a way to democratize admissions and bring you here once you've demonstrated you can do the work." He also stated that any students who want to voice ideas or get involved in these online initiatives can contact the MIT Office of Digital Learning. Beyond MIT, there are also numerous digital education companies and organizations that students can work for, such that they can advance their own careers in software engineering or the like while contributing to valuable initiatives.

Outside of the digital realm, there are also opportunities for students to help expand access to education. One example is the Educational Studies Program (ESP), through which MIT students can teach middle and high school students in the Cambridge and Boston area. Autor noted that although the US has the best post-secondary education system globally, its K-12 education system is severely lacking and consequently could greatly benefit from increased MIT student involvement.

Another area where students should get involved is the policy world. Policy reforms will prove essential to resolving or mitigating the impacts of the job loss created by automation. For example, social security programs such as a universal basic income (UBI) could become necessary to support individuals who become unemployed. Additionally, increased spending on technical education could help expand access to high quality education. Conversely, Autor noted that the Republican tax plan would do the exact opposite by taxing tuition breaks as income and removing deductions on student loan interests. It's important to note that all of these potential changes are still highly controversial — Autor himself feels that in-kind transfers are far more effective social safety nets than a UBI, stating that a UBI "decouples income from work, but … work has all kinds of good properties — work isn't just about making a sufficient income, but it gives people a purpose in life; an individual identity; a social circle." This controversy, again, points to the necessity of further research to understand the nuances of the automation issue.

For students who wish to get more closely involved in politics, the MIT Washington Office facilitates interactions between members of the MIT community and entities in DC, including the federal government, think tanks, and NGOs. Its summer internship program gives students the opportunity to play a role in the policy-making process, whether by conducting research at a think tank or working directly on Capitol Hill. President Reif also noted that he and other MIT administrators are hoping to create more programs to facilitate student involvement in politics, and he encouraged students to contact him with any ideas on how the school could expand in this regard.

These conversations, classes, and extracurricular programs that provide exposure to the social aspects of technology are essential in helping students develop more nuanced understandings of technology and its applications. An MIT education can provide students with a wide skill set, but students have great discretion as to how to use those skills. Consequently, students should always maintain critically reflexive perspectives towards technology, and regularly ask themselves whether or not the work that they are doing helps to create their visions of a more prosperous and equitable world. President Reif explained, "I would like for students to take more active ownership on this conversation [...] The future is really yours; it's not mine. So what is the society that you want?"

At a tech-oriented school like MIT, it is imperative that students understand and engage with the negative effects that technology can bring upon society. Technology can be a force for good, but only if we are purposeful with its applications andvigilantly address the problems that it can engender.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the Editorial Board, which consists of Editor in Chief Vivian Zhong, Executive Editor Emma Bingham, and Opinion Editor Steven Truong.

Dissents are the signed opinions of editorial board members choosing to publish their disagreement with the editorial.

Letters to the editor, **columns**, and **editorial cartoons** are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to *letters@tech.mit.edu*. Hard copy submissions should be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become property of *The Tech*, and will not be returned. Letters, columns, and cartoons may also be posted on *The Tech*'s Web site and/or printed or published in any other format or medium now known or later that becomes known. *The Tech* makes no commitment to publish all the letters received.

Guest columns are opinion articles submitted by members of the MIT or local community.

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LETTER TO THE EDITOR

A call for MIT to unite against bigotry and hatred

To the editor:

In a letter to the MIT community on November 1st, 2017, Dean Suzy Nelson called for the MIT community to “come together, unified in the belief that respect, dignity, and empathy are fundamental to whom we are as people and as a community.” This was a timely call following the appearance of a swastika in a residence hall, which was the third such incident in the last 18 months. The Addir Fellows, as a group of students committed to interfaith dialog and religious pluralism, would like to offer members of the MIT community the opportunity to support a statement denouncing these acts of bias and affirming the values of respect and inclusivity that strengthen our community:

As a community of thinkers, tinkerers, and problem solvers, we have a unique opportunity to provide leadership in some of the toughest problems facing our generation. One of these challenges is healing the increasing divisiveness in our society. We note with great concern an uptrend of prejudice and fear of ‘the Other’ that is threatening campuses nationwide. It is our strong desire that MIT will vigorously resist these trends and instead move towards greater connection across our differences. We affirm President Reif’s words that, “At MIT, when our community is at its best, bigotry and discrimination are out of bounds, period.”

Taking inspiration from Martin Luther King Jr., who proclaimed, “Hate cannot drive out hate; only love can do that,” we call for dialogue across all spectrums of views and identities, with the goal of achieving greater understanding and compassion for each other. Through conversations and relationships committed to pursuing knowledge and empathy, we can drive out ignorance and prejudice.

MIT Addir Fellows

Editor’s note: a full list of signatories can be found at http://addir.scripts.mit.edu/www/statement.

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MOVIE REVIEW

‘Not speaking up is ordinary’

Denzel Washington reflects the struggles of the unusual and extraordinary as an idealistic civil rights defense attorney

By Tu-Lan Vu-Han

★★★★☆

Roman J. Israel, Esq.

Written and Directed By Dan Gilroy

Starring Denzel Washington, Colin Farrell, Carmen Ejogo

Nov. 20, 2017

Rated PG-13 (USA), Now Playing

Sold as a legal thriller, this movie is actually a moral-drama and a character study. Denzel Washington, known for his badass roles in blockbuster movies, plays the socially awkward, clumsy, idealistic character of Roman J. Israel, who is dedicated to leading a life of resistance, fighting for the civil rights of the weak, the downtrodden and the impoverished. Out of sync with his own time, Roman appears in oversized 1970s suits and headphones, large, black-rimmed, far-sight glasses and an old suitcase, while sporting a serious afro. The movie actually takes place in modern times, which is nicely presented by Colin Farrell in the role of George Pierce. Being an outcast with savant abilities (he knows the legal code by heart) and some evidence of being on the Aspergers spectrum, Israel had found himself a niche: working with civil rights attorney William Jackson in a small law firm. Upon losing his position, Roman struggles with his awkwardness getting in the way of his passionate ambitions to fight for a good cause. He finally finds his morals and principles challenged as he gets beaten down by a tumultuous series of events: “I am tired of doing the impossible for the ungrateful.”

This movie would not have been realized had Denzel Washington not agreed to play the role. Dan Gilroy, also director of *Nightcrawler*, wrote the script with specifically Denzel Washington in mind to play Israel. Together, they developed the role of Roman J. Israel, who comes across as so alive and believable on screen that viewers will have a hard time trusting their search engine results: *Roman J. Israel, Esq*. is not based on a true story. No real-life references exist.

The movie is carried by strong acting performances by Washington, Farrell and not to mention Ejogo. The artistic grip of transforming Israel into a 1970s character who lives in present times cunningly confers the conflict between preserving one's own convictions and individuality, while feeling the pressure to adapt to a modern society that does not seem to care enough for the social injustices that it lives in. Although this movie may not be a perfectly rounded masterpiece, as some elements and scenes may leave the viewer slightly irritated, it is a thoughtful contemplation on the quiet struggle for change, an advocacy for humanity, and a compassionate spotlight onto those who fall out of the *mainstream*.

THEATER REVIEW

‘Everybody’ loved MTA’s performance

MIT Theater Arts presents *Everybody*

Jacob Jenkins’s *Everybody*

Directed by Anna Kohler

W97 Theater

Nov. 9–11, 16–18

By Hanna Kherzai

Jacob Jenkins’s *Everybody* was written last year but opened with an homage to *Jedermann,* a play written by Hugo von Hoffmannsthal and first performed in 1911, whose beginnings date back to the 15th century play *Everyman*. Its story following “everybody” on their paths to the grave has spoken to crowds since the time the play was performed on the steps of the Salzburg Cathedral in Austria. Opening with this historical basis, the narrator tells us of the nature of the play to come — it was meant to appeal to the masses and hold a message for everyone who witnessed the performance. However, it is one thing to describe such a phenomenon and quite another to impact us after the metaphorical curtains close. *Everybody* did both in a miraculous way that transformed a somewhat unrelatable excerpt into a wonderful, comical performance.

The most impressive piece of the performance was its ability to transcend the play’s intentions. The topics of morality plays are often heavy, dealing with old and immortal ideas of death, deeds, and hell, but the MTA incorporates themes reminiscent of the Day of the Dead, reflecting the Mexican tradition of celebrating death with music, dancing, and strobe lights. Appropriate comic relief gave levity to darker scenes and left the deeper message and the existential monologues with the audience long after the end of the performance.

The new Theater Arts building W97 boasted magnificence and brought in audience members; the crowd eagerly watching *Jedermann* in front of a giant projection of the cathedral sat alongside the actors and actresses as the entire physical landscape shifted. Blurring the distinction between audience and cast did well to parallel the blurring of the distinction of reality and illusion that *Everybody* emphasized.

Put in the words of Tooba Shahid, who played an Everybody/Somebody, “[i]t’s ironic how the opening play of the newly built theatre building at W97, the start of a new chapter for the Music and Theatre Arts Department at MIT, was about death, the very end. Knowing my director, Anna Kohler, I imagine that this irony was intended. Over a period of two months, this play and the people associated with it have taught me life-changing lessons about duality, relationships, the transient nature of life, but perhaps most importantly, about love, for others and one’s own self.”

The cast did an excellent job emulating characters we find difficult to personify, like Love and Friendship. Each night, a drawing of straws chooses a new “Everybody” on the spot. The night I was in the audience, Grace Kuffner ’20 was chosen as our Everybody, and her performance was notable in that she seemed tailored for the role, not randomly chosen, speaking to the versatility of the entire cast. Thanks to them, their director, and the crew that put the performance together and made it beautiful to behold, *Everybody* led to a moment’s reflection and a unique experience for all.

Home for the holidays by SOYO

Hi Mom, Hi Dad. It's so good to finally be home...
Can you help with my iPad? It keeps saying something about a "cloud"
I CAN'T REMEMBER THE WIFI PASSWORD FOR THE LIFE OF ME!!
SOYO 2017

PILED HIGHER AND DEEPER

by Jorge Cham

"The health of the democratic spirit itself is at issue. And the renewal of that spirit is the urgent task at hand.... In recent decades, public confidence in our institutions has declined..."
"Bigotry seems emboldened... We have seen our discourse degraded by casual cruelty.... We've seen nationalism distorted into nativism... Forgotten the dynamism that immigration has always brought to America... We have seen the return of isolationist sentiments..."
"Young people need positive role models. Bullying and prejudice in our public life sets a national tone... and compromises the moral education of children... The only way to pass along civic values is to first live up to them... In short, it is time for American institutions to step up and provide cultural and moral leadership for this nation."
- G.W.Bush, Oct. 19, 2017
JORGE CHAM © 2017
I CAN'T BELIEVE I'M QUOTING GEORGE W. BUSH!
TRULY, THESE ARE THE END TIMES.
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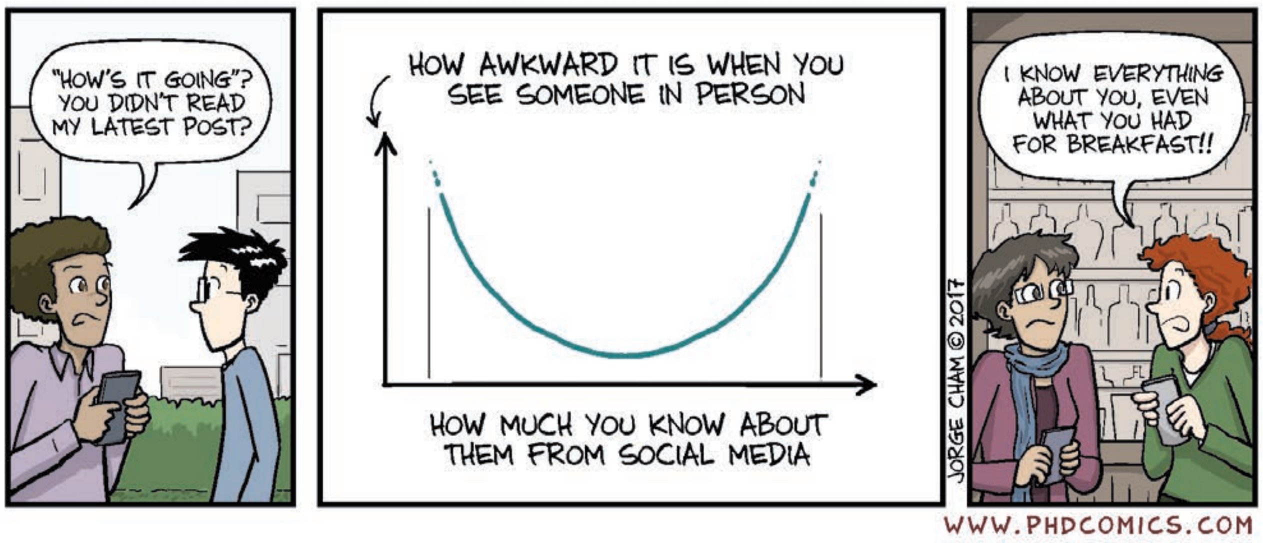
"HOW'S IT GOING"? YOU DIDN'T READ MY LATEST POST?
HOW AWKWARD IT IS WHEN YOU SEE SOMEONE IN PERSON
HOW MUCH YOU KNOW ABOUT THEM FROM SOCIAL MEDIA
JORGE CHAM © 2017
I KNOW EVERYTHING ABOUT YOU, EVEN WHAT YOU HAD FOR BREAKFAST!!
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Winter Is Coming

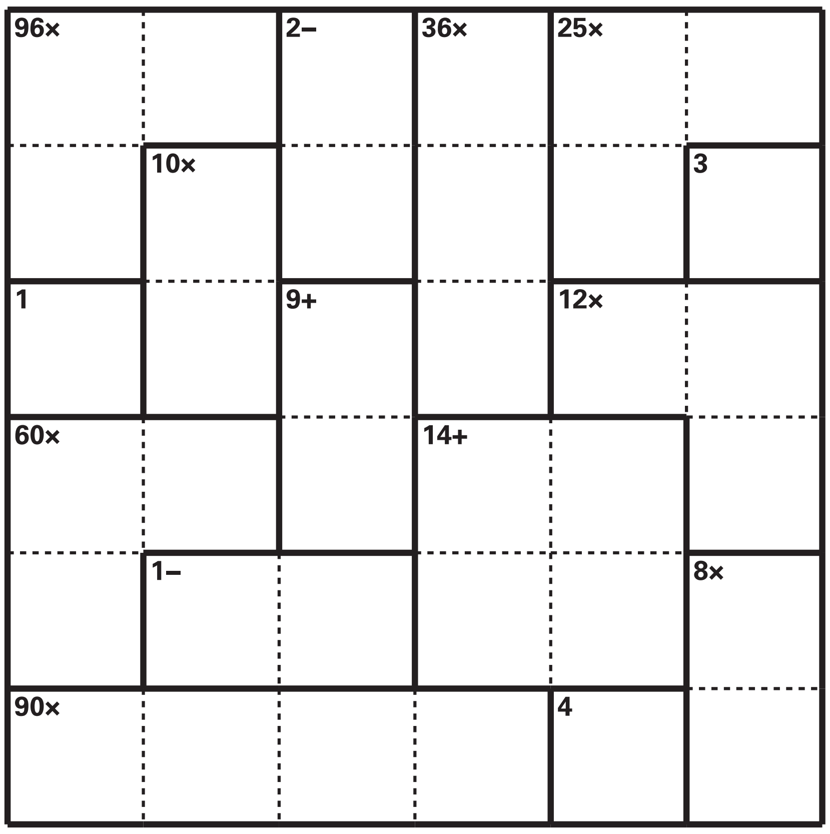
Solution, page 10

			5					
	4		1			3		6
	1	8	3		9		2	
8					2	6	7	
	6						3	
	7	2	4					1
	9		2		3	7	1	
2		3			1		4	
					4			

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

So Are Finals

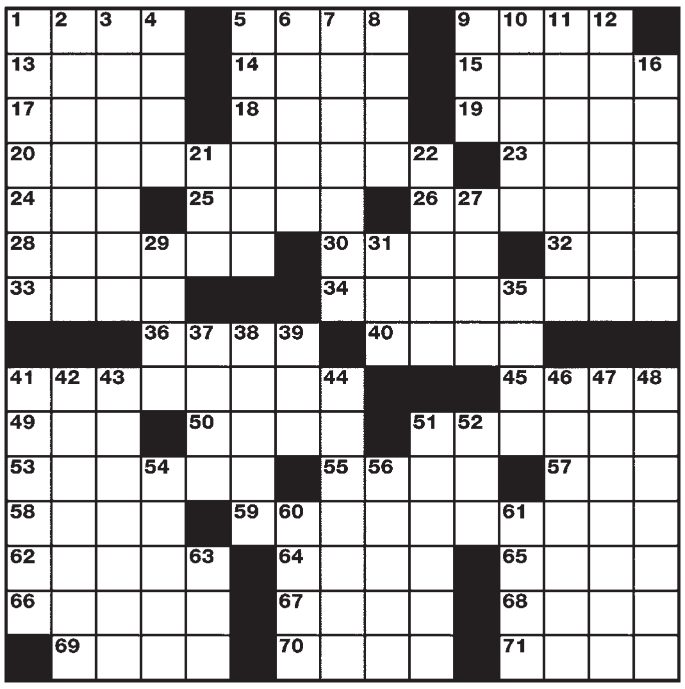
Solution, page 10



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

68 Across Quartet by Clive Probert

Solution, page 10



ACROSS

1 Last word of The Wizard of Oz
5 Sounds of laughter
9 Email sent by bots
13 Cameo shape
14 Big name at Tesla
15 Smarter now, perhaps
17 Animal org. with a bunny logo
18 Evocator of laughter
19 Tureen accessory
20 Papers and mags
23 Very vivid, as crayon colors
24 Wall bracket shape
25 Number-picking game
26 "Platinum" shade
28 Transmits, as some messages
30 High-pitched instrument
32 Unkind comment
33 Mud bath venues
34 Avoid embarrassment
36 Little guys
40 Actress Hatcher
41 Begin litigation
45 Ballet move
49 Brewpub designation
50 Give up rights to
51 Obligate
53 Plenty of nothing
55 Castro of Cuba
57 CPA suggestion, maybe
58 Enthusiastic about
59 Unrestricted period
62 French land
64 Temperamental mood
65 Anatomical projection
66 Rolex rival
67 Pinnacle
68 Work with a word processor
69 Taiwanese PC maker
70 Oracle
71 Informal instants

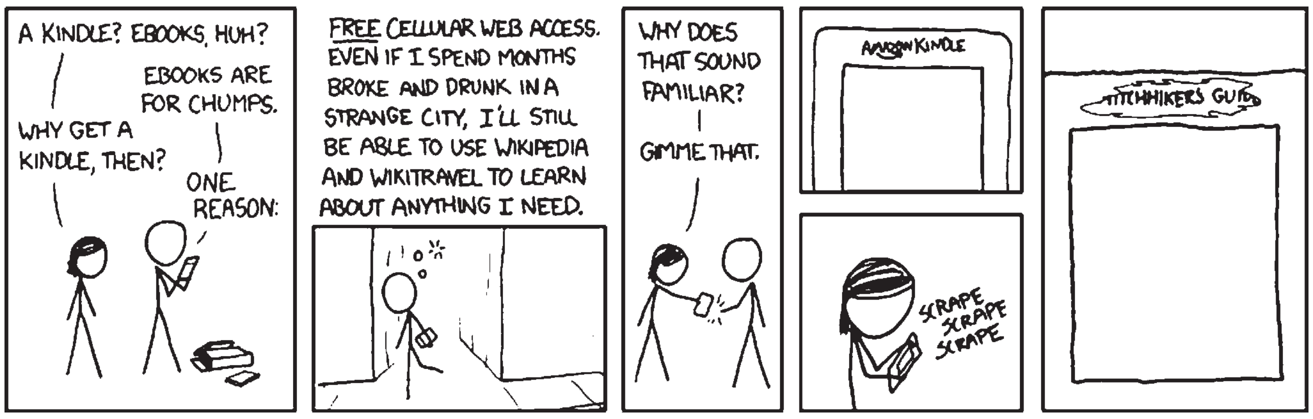
DOWN

1 Lottery ball holders
2 Have coverage in common
3 Title girl of a Dahl novel
4 Special flair
5 Mercury alias
6 Any Star Wars person
7 Jinxes
8 Prefix for oxidant
9 Scale note
10 Dallas suburb
11 Supplementary material
12 Singable
16 Go back (on)
21 Fight stopper of a sort
22 Superior to
27 Sidelong look
29 Ireland or Iceland
31 Mammalian pollinator
35 Bubble's exterior
37 The Nazarene author
38 Resulting from
39 "Science Kid" toon
41 "Done!"
42 Rio beach
43 Half an artist's surname
44 Roman comic playwright
46 About 22 current-sitcom minutes
47 Workout category
48 Astrological influences
51 Civil War's "Boy General"
52 Jai alai shout
54 Small canyon
56 Japanese cartoons
60 Smokey Bear TV spots
61 Beverages labeled 49 Across
63 65 Across locale

A webcomic of romance, sarcasm, math, and language

by Randall Munroe

[548] Kindle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WHY DOES THAT SOUND FAMILIAR?
GIMME THAT.
AMAZON KINDLE
SCRAPE SCRAPE SCRAPE
HITCHHIKER'S GUIDE

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Solution to Winter

from page 7

3	2	6	5	4	8	1	9	7
5	4	9	1	2	7	3	8	6
7	1	8	3	6	9	4	2	5
8	3	5	9	1	2	6	7	4
4	6	1	7	8	5	9	3	2
9	7	2	4	3	6	8	5	1
6	9	4	2	5	3	7	1	8
2	8	3	6	7	1	5	4	9
1	5	7	8	9	4	2	6	3

Solution to Finals

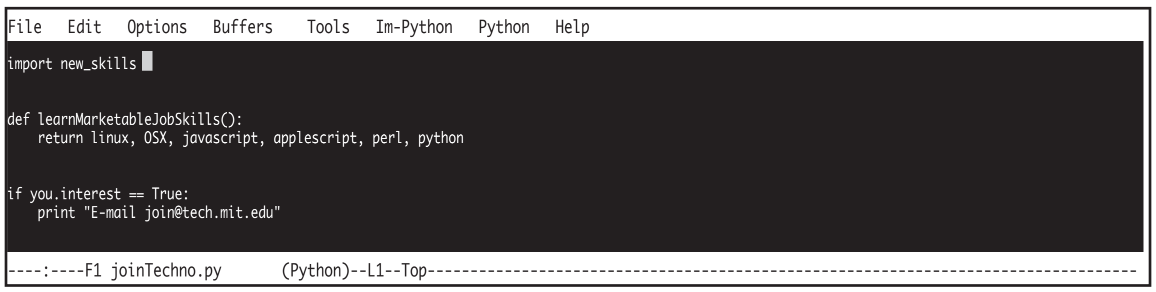
from page 7

6	4	3	2	1	5
4	2	1	6	5	3
1	5	4	3	2	6
2	6	5	4	3	1
5	3	2	1	6	4
3	1	6	5	4	2

Solution to Across

from page 7

H	O	M	E	■	H	A	H	A	■	S	P	A	M	■
O	V	A	L	■	E	L	O	N	■	O	L	D	E	R
P	E	T	A	■	R	I	O	T	■	L	A	D	L	E
P	R	I	N	T	M	E	D	I	A	■	N	E	O	N
E	L	L	■	K	E	N	O	■	B	L	O	N	D	E
R	A	D	I	O	S	■	O	B	O	E	■	D	I	G
S	P	A	S	■	■	■	S	A	V	E	F	A	C	E
■	■	■	L	A	D	S	■	T	E	R	I	■	■	■
F	I	L	E	S	U	I	T	■	■	■	L	E	A	P
I	P	A	■	C	E	D	E	■	C	O	M	P	E	L
N	A	U	G	H	T	■	R	A	U	L	■	I	R	A
I	N	T	O	■	O	P	E	N	S	E	A	S	O	N
T	E	R	R	E	■	S	N	I	T	■	L	O	B	E
O	M	E	G	A	■	A	C	M	E	■	E	D	I	T
■	A	C	E	R	■	S	E	E	R	■	S	E	C	S

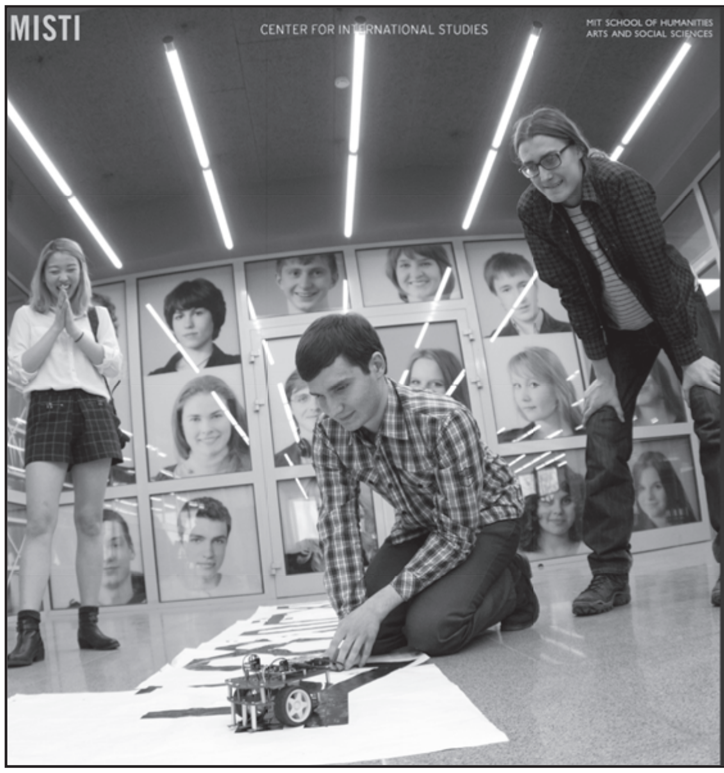


```
import new_skills


def learnMarketableJobSkills():
    return linux, OSX, javascript, applescript, perl, python


if you.interest == True:
    print "E-mail join@tech.mit.edu"
```

```
----:----F1 joinTechno.py       (Python)--L1--Top-----------------------------------------------------------------------------
```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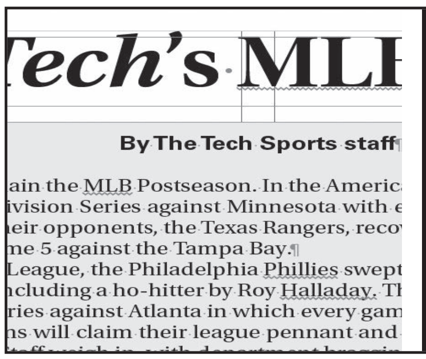

ech's MLI

By The Tech Sports staff¶

ain the MLB Postseason. In the Americ
ivision Series against Minnesota with e
eir opponents, the Texas Rangers, reco
ne 5 against the Tampa Bay.¶
League, the Philadelphia Phillies swept
ncluding a ho-hitter by Roy Halladay. T
ries against Atlanta in which every gam
ns will claim their league pennant and

Can you find the typo? (Answer is below)

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“ho-hitter” in the second line of the second paragraph should be “no-hitter”

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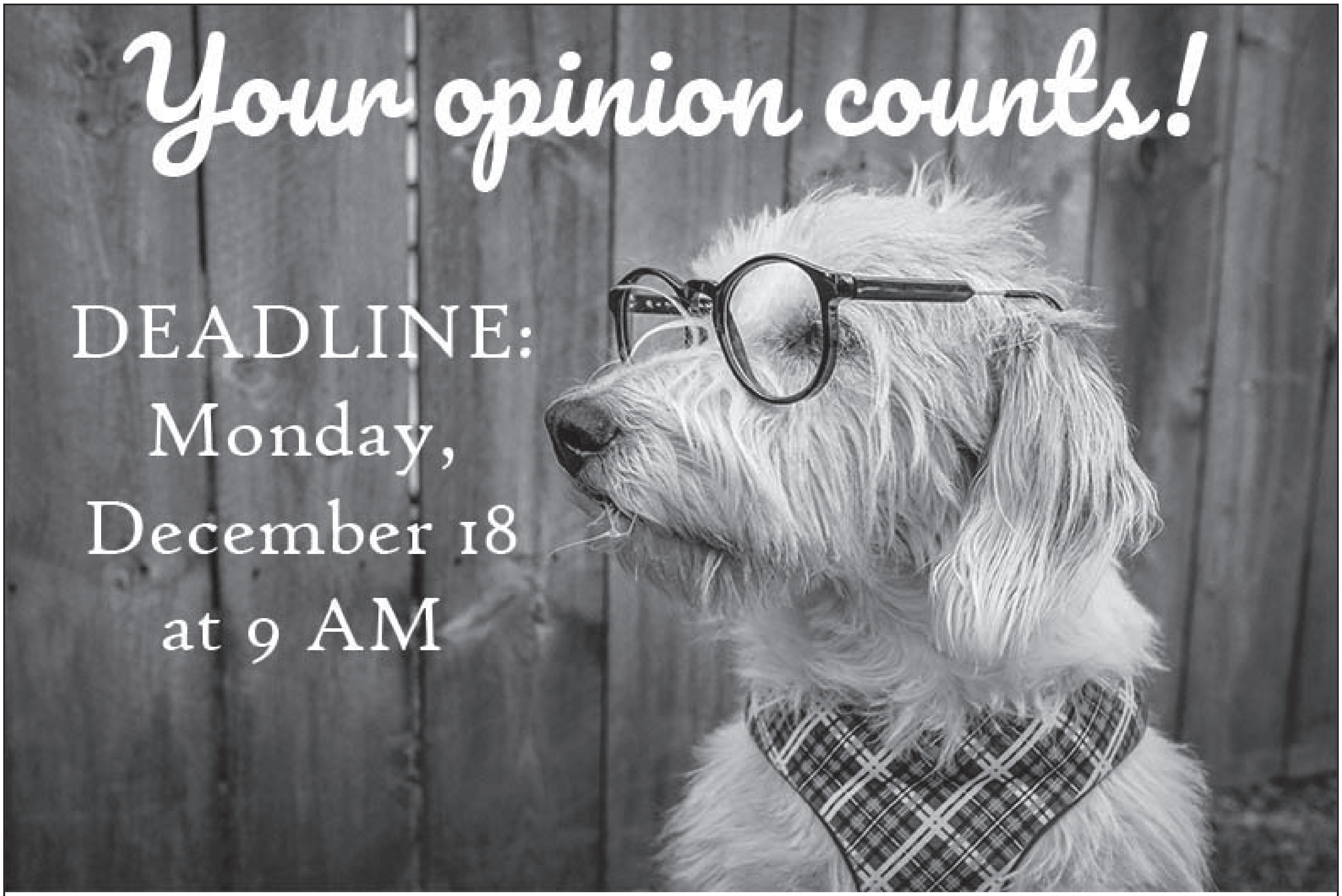

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